**Ruth Alison Howison** (ruthhowison@gmail.com)
Born, 02 March 1976

## EDUCATION

**PhD. Ecology, Rijksuniversiteit Groningen**
Howison, R.A., (2015) The battle between biocompaction and bioturbation: Biotically Driven Vegetation Mosaics, Conservation Ecology Group, Groningen, Rijksuniversiteit Groningen. Supervised by: Dr. ir. Christian Smit and Prof. dr. Han Olff

**MSc. Ecology, University of KwaZulu-Natal**
Howison, R. A., (2009). Food preferences and feeding interactions among browsers, and the effect of an exotic invasive weed (*Chromolaena odorata*) on the endangered black rhino (*Diceros bicornis*), in an African savanna. School of Biological & Conservation Sciences. Westville, University of KwaZulu-Natal. Supervised by: Prof. dr. Han Olff and Prof. dr. Rob Slotow

**BSc. Degree in Biology, University of South Africa**
Graduated in 2002, Majors Zoology & Botany (distinction)

**Language courses**
2014, Dutch Courses level 3 (B1 > B2), Rijksuniversiteit Groningen
2013, Dutch Courses level 2 (A2 > B1), Rijksuniversiteit Groningen

## WORK EXPERIENCE

**Post-Doctoral Researcher, Rijksuniversiteit Groningen, Conservation Ecology Group**
2015 – Present: Spatial ecology of the migratory Black-tailed Godwit
Follow the seasonal migrations of Black-tailed Godwits on:
http://volg.keningfanegreide.nl/

**Phd candidate, Rijksuniversiteit Groningen, Conservation Ecology Group**
2011 – 2015 (4 years): Title: Biotically Driven Vegetation Mosaics: The battle between biocompaction and bioturbation, Supervised by: Dr. i.r. Christian Smit and Prof. dr. Han Olff

**Geographic Information Technician, University of KwaZulu-Natal**
2006 – 2011 (4 years 9 months) Pietermaritzburg Area, South Africa
- Assist postgraduate students with spatial data analysis
- Develop and teach training practicals for postgraduate and undergraduate students in the use of various GIS/RS, statistical, database and spreadsheet analytical software

- Generate professional quality figures for publications
- Acquire and maintain the digital data repository of spatial and associated attribute information

**Data manager for the Savanna Biodiversity Research Project, Rijksuniversiteit Groningen**

2003 – 2006 (2 years 11 months) Hluhluwe-iMfolozi Park, KwaZulu-Natal, South Africa

- Assist PhD and Master students with ecological data and spatial data analysis
- Develop a geodatabase for all spatial information collected by Hluhluwe-iMfolozi Park
- Develop Access databases of all information collected by the SABRE project.

**Office manager for the Hluhluwe Research Centre, Hluhluwe-iMfolozi Park, Ezemvelo KwaZulu-Natal Wildlife, South Africa**

1997 – 2003 (7 years 5 months)

- Finance, procurement and logistics manager of research activities within the Hluhluwe-iMfolozi Park, serving 10 PI's and 20 field technicians.
- Participated in all research activities in particular field data collection, data entry and spatial data recording and analyses.
- Projects included: vegetation demography surveys; alien plant mapping; wild dog, lion and elephant reintroductions; black rhino monitoring; animal census (line transects and aerial counts); hyaena surveys; digitalization of the paper map archive.

**Publications**

- Howison, R. A., Olff H., Steever, R.D., Smit, C., (2015). Large herbivores change the direction of interactions within plant communities along a salt marsh stress gradient. Journal of Vegetation Science 26: 1159–1170.
- Veldhuis M.P., Howison R.A., Fokkema R.W., Tielens E., & Olff H. (2014). A novel mecha nism for grazing lawn formation: large herbivore-induced modification of the plant-soil water balance. Journal of Ecology.
- van der Plas F., Zeinstra P., Veldhuis M., Fokkema R., Tielens E., Howison R.A., & Olff H. (2013) Responses of savanna lawn and bunch grasses to water limitation. Plant Ecology, 214, 1157–1168.
- van der Plas F., Howison R.A., Reinders J., Fokkema W., & Olff H. (2012). Functional traits of trees on and off termite mounds: understanding the origin of biotically-driven heterogeneity in savannas. Journal of Vegetation Science.

**Papers in preparation**

- Howison R.A.*, Olff H.*, van de Koppel J., & Smit C., (in review Ecological Monographs) Biotically driven vegetation mosaics: the battle between biocompaction and bioturbation
- Howison R.A, van Puijenbroek M.E.B., Olff, H. & Smit, C., (in review J. of Ecology) Bioturbation alters environmental stress shifting the outcome plant-plant interactions
- Howison R.A., Berg M.P., van Dijk K., Smit C. & Olff H. (in review Ecosystems) Macrodetritivores, the reverse mechanism from lawn to bunch grasses

- Plas, F., Howison, R., Mpanza N., Cromsigt J.P.G.M., & Olff, H., (in review J. of Ecology) Not total grazing pressure, but functional composition of grazer communities modulates variation in grass communities in an African savannah
- Howison, R. A., Olff, H., Owen-Smith, N., Cromsigt, J.P.G.M., Archibald S., (in review) The abiotic template for landscape heterogeneity, Savanna Ecology and Management: conserving Africa's mega-diversity in the Hluhluwe-iMfolozi Park. J. P. G. M. Cromsigt, S. Archibald and N. Owen-Smith. Cambridge, Cambridge University Press

**Scientific Poster Awards**

2015 Gelifes opening symposium 2nd prize, Title: Ground breakers
2014 NAEM 1st prize, Title: A rock paper scissors game on the salt marsh

**Lecturing and Supervision**

- 2006 – 2015, Teaching assistant, Ecological data analyses techniques using GIS (ArcEditor), Database (Access, OpenBase) and Statistics (R), Edmund Mundus/Top Master Programme, Rijksuniversiteit Groningen
- 2011 – 2015, Supervised 6 x master theses students, 4 x Edmund Mundus Msc mini - projects and 8 x 3rd year bachelor students within the Conservation Ecology Group, Rijksuniversiteit Groningen
- 2010, Course coordinator, 3rd level Agricultural course, Title: Natural Resource Assessment, University of KwaZulu-Natal, South Africa

**Unpublished Reports**

- Student training notes for data manipulation, presentation and interpretation using MS Excel XP, and use of various geographic Information and remote sensing software
- Howison, R.A., (2005), Changes to the 1975 Vegetation Map and other Major Historical Vegetation Management Events in Hluhluwe-Umfolozi Park, unpublished report
- Howison, R.A., (2005), Combined Soil Map for Hluhluwe-iMfolozi Park, unpublished report
- Howison, R.A., (2005), Inverse distance weighted digital elevation model for Hluhluwe-iMfolozi Park, unpublished report
- Howison,R.A., (2002), Ecological Baseline Survey of the Wechiau Community Hippo Sanctuary report, Earthwatch volunteers briefing report, Earthwatch International, UK
- Conway, A., Balfour, D., Dale,T., Hartley, P., Morrison, P., Howison, R.A., Galli, N., Wadge, M, (2001), Hluhluwe-Umfolozi Park Management Plan, KZN Wildlife, Unpublished report.
- Compilation of the Hluhluwe-IMfolozi Park annual biological monitoring reports - Animal Population Monitoring Database (1999, 2000, 2001)